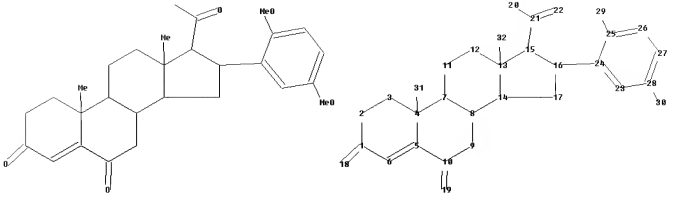
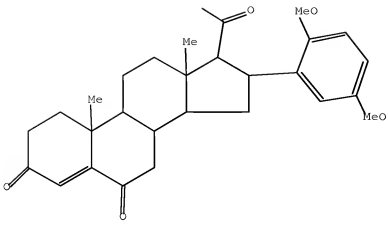


chain nodes :
18 19 20 21 22 29 30 31 32
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 23 24 25 26 27 28
chain bonds :
1-18 4-31 10-19 13-32 15-21 16-24 20-21 21-22 25-29 28-30
ring bonds :
1-2 1-6 2-3 3-4 4-5 4-7 5-6 5-10 7-8 7-11 8-9 8-14 9-10 11-12 12-13
13-14 13-15 14-17 15-16 16-17 23-24 23-28 24-25 25-26 26-27 27-28
exact/norm bonds :
1-2 1-6 1-18 2-3 3-4 4-5 4-7 5-6 5-10 7-8 7-11 8-9 8-14 9-10 10-19
11-12 12-13 13-14 13-15 14-17 15-16 16-17 21-22
exact bonds :
4-31 13-32 15-21 16-24 20-21 25-29 28-30
normalized bonds :
23-24 23-28 24-25 25-26 26-27 27-28

Match level :
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS
18:CLASS 19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS 25:CLASS
26:CLASS 27:CLASS 28:CLASS 29:CLASS 30:CLASS 31:CLASS 32:CLASS

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

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SAMPLE SCREEN SEARCH COMPLETED -        5 TO ITERATE

100.0% PROCESSED        5 ITERATIONS                                0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:            5 TO      234
PROJECTED ANSWERS:               0 TO        0

L2            0 SEA SSS SAM L1

=> s l1 sss full
FULL SEARCH INITIATED 15:45:30 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -      118 TO ITERATE

100.0% PROCESSED      118 ITERATIONS                                0 ANSWERS
SEARCH TIME: 00.00.01

L3            0 SEA SSS FUL L1

=> logoff hold

     (FILE 'HOME' ENTERED AT 15:44:48 ON 12 MAY 2009)

     FILE 'REGISTRY' ENTERED AT 15:45:02 ON 12 MAY 2009
L1              STRUCTURE UPLOADED
                D L1
L2            0 SEA FILE=REGISTRY SSS SAM L1
L3            0 SEA FILE=REGISTRY SSS FUL L1
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                 ENTRY    SESSION
FULL ESTIMATED COST                             185.88     186.10

 SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 15:45:44 ON 12 MAY 2009
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Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTASEC1612

PASSWORD:
 * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'REGISTRY' AT 15:49:22 ON 12 MAY 2009
FILE 'REGISTRY' ENTERED AT 15:49:22 ON 12 MAY 2009
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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	185.88	186.10

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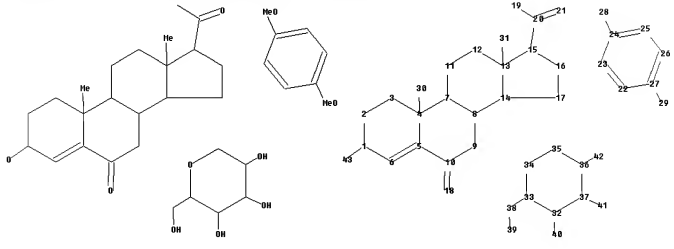

chain nodes :
18 19 20 21 28 29 30 31 38 39 40 41 42 43
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 22 23 24 25 26 27
32 33 34 35 36 37
chain bonds :
1-43 4-30 10-18 13-31 15-20 19-20 20-21 24-28 27-29 32-40 33-38 36-42
37-41 38-39
ring bonds :
1-2 1-6 2-3 3-4 4-5 4-7 5-6 5-10 7-8 7-11 8-9 8-14 9-10 11-12 12-13
13-14 13-15 14-17 15-16 16-17 22-23 22-27 23-24 24-25 25-26 26-27 32-33
32-37 33-34 34-35 35-36 36-37
exact/norm bonds :
1-2 1-6 1-43 2-3 3-4 4-5 4-7 5-6 5-10 7-8 7-11 8-9 8-14 9-10 10-18
11-12 12-13 13-14 13-15 14-17 15-16 16-17 20-21 32-33 32-37 32-40 33-34
34-35 35-36 36-37 36-42 37-41 38-39
exact bonds :
4-30 13-31 15-20 19-20 24-28 27-29 33-38
normalized bonds :
22-23 22-27 23-24 24-25 25-26 26-27

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Match level :
1:CLASS  2:CLASS  3:CLASS  4:CLASS  5:CLASS  6:CLASS  7:CLASS  8:CLASS  9:CLASS
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42:CLASS  43:CLASS



L4      STRUCTURE UPLOADED

=> d l4
L4 HAS NO ANSWERS
L4              STR
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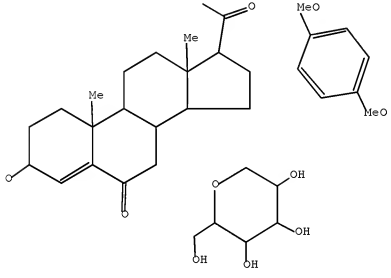


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Structure attributes must be viewed using STN Express query preparation.


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SAMPLE SCREEN SEARCH COMPLETED -       28 TO ITERATE

100.0% PROCESSED       28 ITERATIONS                                0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:          243 TO      877
PROJECTED ANSWERS:               0 TO        0

L5            0 SEA SSS SAM L4

=> s l4 sss full
FULL SEARCH INITIATED 15:50:13 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -      578 TO ITERATE
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```
100.0% PROCESSED      578 ITERATIONS                              0 ANSWERS
SEARCH TIME: 00.00.01

L6            0 SEA SSS FUL L4

=> file uspatfull
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                   372.24     372.46

FILE 'USPATFULL' ENTERED AT 15:50:27 ON 12 MAY 2009
CA INDEXING COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 12 May 2009 (20090512/PD)
FILE LAST UPDATED: 12 May 2009 (20090512/ED)
HIGHEST GRANTED PATENT NUMBER: US7533422
HIGHEST APPLICATION PUBLICATION NUMBER: US20090119816
CA INDEXING IS CURRENT THROUGH 12 May 2009 (20090512/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 12 May 2009 (20090512/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2009

USPATFULL now includes complete International Patent Classification (IPC)
reclassification data for the third quarter of 2008.

=> s us20060149045/pn
L7            1 US20060149045/PN

=> file reg
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
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FULL ESTIMATED COST                                     1.53     373.99

FILE 'REGISTRY' ENTERED AT 15:51:09 ON 12 MAY 2009
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Property values tagged with IC are from the ZIC/VINITI data file
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STRUCTURE FILE UPDATES:   10 MAY 2009  HIGHEST RN 1145355-82-3
DICTIONARY FILE UPDATES:  10 MAY 2009  HIGHEST RN 1145355-82-3

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2009.

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=> tra l7 1- rn
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```
L8          TRANSFER L7 1- RN :     386 TERMS
L9         386 L8

=> file caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.48     391.08

FILE 'CAPLUS' ENTERED AT 15:51:37 ON 12 MAY 2009
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FILE COVERS 1907 - 12 May 2009  VOL 150 ISS 20
FILE LAST UPDATED: 10 May 2009  (20090510/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED:  Feb 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE:  Feb 2009

CAplus now includes complete International Patent Classification (IPC)
reclassification data for the third quarter of 2008.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate

=> s l9 and cellobiosyl
        143744 L9
           281 CELLOBIOSYL
L10          5 L9 AND CELLOBIOSYL

=> d ibib ab hitstr 1-5

L10  ANSWER 1 OF 5  CAPLUS  COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER:         2007:1364352  CAPLUS Full-text
DOCUMENT NUMBER:          148:32596
TITLE:                    Nutraceutical compositions from microalgae and related
                          methods of production and administration
INVENTOR(S):              Dillon, Harrison F.; Somanchi, Aravind; Rao, Kamalesh;
                          Jones, Peter J. H.
PATENT ASSIGNEE(S):       Solazyme, Inc., USA
SOURCE:                   PCT Int. Appl., 199pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   8
PATENT INFORMATION:
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PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007136428	A2	20071129	WO 2007-US1319	20070119
WO 2007136428	A3	20081127		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA

US 20070167396	A1	20070719	US 2006-336428	20060119
US 20070167397	A1	20070719	US 2006-336430	20060119
US 20070166449	A1	20070719	US 2006-336431	20060119
US 20070166797	A1	20070719	US 2006-336656	20060119
US 20070166266	A1	20070719	US 2006-337103	20060119
US 20070167398	A1	20070719	US 2006-337171	20060119
US 20070191303	A1	20070816	US 2006-336426	20060119
EP 1993565	A2	20081126	EP 2007-808975	20070119

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, RS

PRIORITY APPLN. INFO.:		
US 2006-336426	A	20060119
US 2006-336428	A	20060119
US 2006-336430	A	20060119
US 2006-336431	A	20060119
US 2006-336656	A	20060119
US 2006-337103	A	20060119
US 2006-337171	A	20060119
US 2006-816967P	P	20060628
US 2006-832091P	P	20060720
US 2006-838452P	P	20060817
US 2006-872072P	P	20061130
WO 2007-US1319	W	20070119

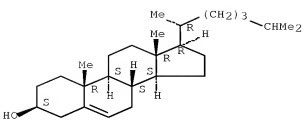
AB Polysaccharides with nutraceutical application may by obtained by culturing red microalgae and the nutraceutical compns. thus produced may comprise a carrier and homogenized microalgal cells. Addnl. components may include phytosterols, limonoids, flavonoids, and tocotrienols. The polysaccharides may be used in applications such as reducing cholesterol in mammals, inactivating viruses, stabilizing foods, etc. Thus, total serum cholesterol in an animal model (hamsters) over 30 days was decreased 35-62% by dietary inclusion of Porphyridium biomass homogenate and polysaccharide, the highest decreases being observed when phytosterols were also present. Transgenic algae may be used that are capable of utilizing fixed carbon sources for energy. Also provided are novel nucleic acid sequences from red microalgae.

IT 57-88-5, Cholest-5-en-3-ol (3β)-, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(blood; nutraceutical compns. from red microalgae and related methods of production and administration)

RN 57-88-5 CAPLUS

CN Cholest-5-en-3-ol (3β)- (CA INDEX NAME)

Absolute stereochemistry.

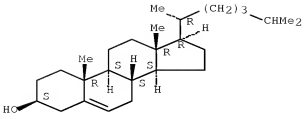


L10 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2000:490669 CAPLUS Full-text
DOCUMENT NUMBER: 133:250148
TITLE: Intestinal absorption of cholesterol is mediated by a saturable, inhibitable transporter
AUTHOR(S): Hernandez, M.; Montenegro, J.; Steiner, M.; Kim, D.; Sparrow, C.; Detmers, P. A.; Wright, S. D.; Chao, Y.-S.
CORPORATE SOURCE: Merck Research Laboratories, Rahway, NJ, 07065, USA
SOURCE: Biochimica et Biophysica Acta, Molecular and Cell Biology of Lipids (2000), 1486(2-3), 232-242
CODEN: BBMLFG; ISSN: 1388-1981
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Although the mechanism by which dietary cholesterol is absorbed from the intestine is poorly understood, it is generally accepted that cholesterol is absorbed from bile acid micelles in the jejunum. Once inside the enterocytes, cholesterol is esterified by the action of acyl-CoA:cholesterol acyltransferase (ACAT), assembled into chylomicrons, and secreted into the lymph. In this work, mechanistic aspects of cholesterol absorption were probed using compds. that block cholesterol absorption in hamsters. Sterol glycoside cholesterol absorption inhibitors, exemplified by L-166,143, (3β,5α,25R)-3-[(4'',6''-bis[2-fluoro-phenylcarbamoyl]-B-D- cellobiosyl)oxy]-spirostan-11-one, potently blocked absorption of radioactive cholesterol, and the potencies of several analogs correlated with their ability to lower plasma cholesterol. Each mol. of L-166,143 blocked the uptake of 500 mols. of cholesterol, rendering it unlikely that the inhibitor interacts directly with the cholesterol or bile acid. Radiolabeled L-166,143 bound to the mucosa and binding was blocked by active, but not inactive, cholesterol absorption inhibitors. Subtle changes in the structure of sterol glycosides yielded large changes in their ability to block both cholesterol absorption and binding of radiolabeled L-166,143. dog. Large species-to-species variation in potency was also observed These lines of evidence support the interpretation that dietary cholesterol is absorbed via a specific transporter found in the intestinal mucosa.

IT 57-88-5, Cholesterol, biological studies
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(intestinal absorption of cholesterol mediated by saturable inhibitable transporter in hamsters, dogs, rats and mice)
RN 57-88-5 CAPLUS
CN Cholest-5-en-3-ol (3β)- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1994:509562 CAPLUS Full-text
DOCUMENT NUMBER: 121:109562
ORIGINAL REFERENCE NO.: 121:19815a,19818a
TITLE: Steroidal glycosides for treating hypercholesterolemia
INVENTOR(S): Deninno, Michael Paul; McCarthy, Peter Andrew
PATENT ASSIGNEE(S): Pfizer Inc., USA
SOURCE: PCT Int. Appl., 85 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9400480	A1	19940106	WO 1993-US4092	19930506
W: AU, BG, BR, CA, CZ, DE, JP, KR, NO, NZ, RO, RU, SK, UA, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9342265	A	19940124	AU 1993-42265	19930506
EP 647234	A1	19950412	EP 1993-910951	19930506
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
JP 07504921	T	19950601	JP 1993-502331	19930506
EP 796862	A2	19970924	EP 1997-200454	19930506
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EP 796863	A2	19970924	EP 1997-200455	19930506
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
EP 796864	A2	19970924	EP 1997-200456	19930506
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
BR 9306619	A	19981208	BR 1993-6619	19930506
CN 1085561	A	19940420	CN 1993-107620	19930625
ES 2074006	A1	19950816	ES 1993-1507	19930705
ES 2074006	B1	19960316		
US 5629295	A	19970513	US 1994-351470	19941220
NO 9405001	A	19950214	NO 1994-5001	19941223
JP 09309897	A	19971202	JP 1997-30588	19941226
PRIORITY APPLN. INFO.:			US 1992-904914	A2 19920626
			EP 1993-910951	A3 19930506
			WO 1993-US4092	A 19930506
			JP 1994-502331	A3 19941226

OTHER SOURCE(S): MARPAT 121:109562
AB Certain steroidal glycosides of formula I [e.g., Q1 = CO, CH(OH); Q2 = CO, CH2, CH(OH); Q3 = CH(OR1), CH(OXOR1); Q4, Q5 = CH2; R1 = various glycosyl residues; X = alkylene; plus several addnl. groups of definitions], useful as

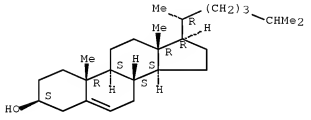
hypocholesterolemic and antiatherosclerotic agents (no data), are claimed and prepared For example, ZnF2-promoted coupling of (3β,5α,25R)-3-hydroxyspirostan-11-one with heptaacetyl-β-D-cellobiosyl bromide (93% yield) and deacetylation with NaOMe in MeOH-THF (57% yield) gave the invention compound (3β,5α,25R)-3-[(β-D-cellobiosyl)oxy]spirostan-11-one. Prepns. of approx. 50 I and numerous precursors are described.

IT 57-88-5, Cholesterol, biological studies
RL: BIOL (Biological study)
(absorption of, inhibitors of, steroidal glycosides as)

RN 57-88-5 CAPLUS

CN Cholest-5-en-3-ol (3β)- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1990:50901 CAPLUS Full-text

DOCUMENT NUMBER: 112:50901

ORIGINAL REFERENCE NO.: 112:8649a,8652a

TITLE: ESR study on synthetic glyceroglycolipid liposomal membranes

AUTHOR(S): Naito, Mikihiko; Utsumi, Hideo; Umeda, Masato; Kudo, Ichiro; Takeshita, Keizo; Hamada, Akira; Nojima, Shoshichi; Inoue, Keizo

CORPORATE SOURCE: Fac. Pharm. Sci., Univ. Tokyo, Tokyo, 113, Japan

SOURCE: Biochimica et Biophysica Acta, Biomembranes (1989), 985(2), 147-52
CODEN: BBBMBS; ISSN: 0005-2736

DOCUMENT TYPE: Journal

LANGUAGE: English

AB It was previously reported that glyceroglycoplipid liposomes without cholesterol activated mouse peritoneal macrophages in vivo and in vitro, whereas glyceroglycolipid liposomes containing equimolar cholesterol did not. In order to characterize the properties of the glyceroglycolipid membranes, ESR spectroscopic studies were carried out with an acyl spin-labeled galactosyl ceramide (SL-GC) or a headgroup spin-labeled phospholipid (SL-6-DPPA) in 1,2-dipalmityl[β-cellobiosyl (1'→3)]glycerol (Cel-DAG) liposomal membranes. The ESR spectrum of the SL-GC in the Cel-DAG liposomes at 37° was a single broad line, indicating that the SL-GC mols. were excluded almost completely from Cel-DAG domains and formed clusters in the membranes. The spectrum of SL-6-DPPA in the Cel-DAG liposomes at 37° showed broad resonance lines with the central peak being the highest, while that at 60° gave narrow lines with the low-field peak being the highest. This observation and rotational correlation time anal. showed that the mol. motions of the spin-label moiety of the SL-6-DPPA were extremely restricted at 37°C but not above

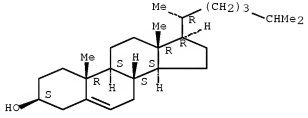
Tc. These results suggest that below Tc the Cel-DAG mols. are packed tightly and restricted in motion in the membrane. Incorporation of cholesterol into the Cel-DAG liposomal membranes gave (1) the spectra of the SL-GC triplet, and (2) the spectra of the SL-6-DPPA narrow resonance with the low-field peak being the highest. Apparently, cholesterol disturbs the rigid-packed structure of the Cel-DAG membrane and increases the mol. motions of the Cel-DAG. The DSC anal. of Cel-DAG with and without cholesterol agreed well with the results of the ESR technique. Thus it is assumed that peritoneal macrophages recognize the rigid-packed carbohydrate residues which are restricted in motion on the Cel-DAG membranes.

IT 57-88-5, Cholesterol, biological studies
RL: BIOL (Biological study)
(glyceroglycolipid membrane fluidity response to)

RN 57-88-5 CAPLUS

CN Cholest-5-en-3-ol (3β)- (CA INDEX NAME)

Absolute stereochemistry.



L10 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1987:475887 CAPLUS Full-text

DOCUMENT NUMBER: 107:75887

ORIGINAL REFERENCE NO.: 107:12489a,12492a

TITLE: Activation of mouse peritoneal macrophages by synthetic glyceroglycolipid liposomes

AUTHOR(S): Naito, Mikihiko; Kudo, Ichiro; Mukai-Sato, Yukiko; Tsushima, Susumu; Nomura, Hiroaki; Nojima, Shoshichi; Inoue, Keizo

CORPORATE SOURCE: Fac. Pharm. Sci., Univ. Tokyo, Tokyo, 113, Japan

SOURCE: Cancer Immunology Immunotherapy (1987), 24(2), 158-64
CODEN: CIIMDN; ISSN: 0340-7004

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Liposomes composed of chem. synthesized glyceroglycolipids, such as 1,2-dipalmityl-[β-cellobiosyl-(1'→3)]-glycerol (Cel-DAG), 1,2-dipalmityl-[β-lactosyl-(1'→3)]-glycerol, or 1,2-dipalmityl-[β-maltosyl-(1'→3)]-glycerol, enhanced protective immunity against transplantable tumor cells (sarcoma 180) in ICR mice. Peritoneal exudate cells prepared from mice treated in vivo with Cel-DAG showed cytostatic activity in vitro against the mouse leukemia cell line, EL-4. Adherent cells separated from this preparation showed similar activity. Peritoneal cells from polypeptone-injected mice acquired appreciable cytostatic activity when incubated in vitro in the presence of glyceroglycolipid liposomes. The adherent cell fraction alone showed rather weak cytostatic activity when pretreated with the glyceroglycolipids, and full activity was restored by supplementing with the nonadherent cell fraction. The ability of glycolipids to induce tumoricidal effects was affected by cholesterol content: with increasing cholesterol content, the activities decreased. Cholesterol-free glycolipid liposomes were taken more efficiently

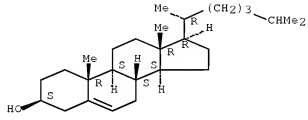
by macrophages than cholesterol-containing liposomes. Cholesterol modifies the surface property of glyceroglycolipid liposomes. Activation of macrophages is responsible for enhancement of protective immunity against tumor cells by injection of these glycolipids in vivo.

IT 57-88-5, Cholesterol, biological studies
RL: BIOL (Biological study)
(glyceroglycolipid liposomes activation of macrophages modulation by)

RN 57-88-5 CAPLUS

CN Cholest-5-en-3-ol (3β)- (CA INDEX NAME)

Absolute stereochemistry.



=> d his

(FILE 'HOME' ENTERED AT 15:44:48 ON 12 MAY 2009)

FILE 'REGISTRY' ENTERED AT 15:45:02 ON 12 MAY 2009
L1 STRUCTURE UPLOADED
L2 0 S L1 SAM
L3 0 S L1 SSS FULL
L4 STRUCTURE UPLOADED
L5 0 S L4 SSS SAM
L6 0 S L4 SSS FULL

FILE 'USPATFULL' ENTERED AT 15:50:27 ON 12 MAY 2009
L7 1 S US20060149045/PN

FILE 'REGISTRY' ENTERED AT 15:51:09 ON 12 MAY 2009

FILE 'USPATFULL' ENTERED AT 15:51:17 ON 12 MAY 2009
L8 TRA L7 1- RN : 386 TERMS

FILE 'REGISTRY' ENTERED AT 15:51:18 ON 12 MAY 2009
L9 386 SEA L8

FILE 'CAPLUS' ENTERED AT 15:51:37 ON 12 MAY 2009
L10 5 S L9 AND CELLOBIOSYL

=> logoff hold

(FILE 'HOME' ENTERED AT 15:44:48 ON 12 MAY 2009)

FILE 'REGISTRY' ENTERED AT 15:45:02 ON 12 MAY 2009
L1 STRUCTURE UPLOADED
D L1
L2 0 SEA SSS SAM L1

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L3            0 SEA SSS FUL L1
L4              STRUCTURE UPLOADED
                D L4
L5            0 SEA SSS SAM L4
L6            0 SEA SSS FUL L4

     FILE 'USPATFULL' ENTERED AT 15:50:27 ON 12 MAY 2009
L7            1 SEA SPE=ON  ABB=ON  PLU=ON  US20060149045/PN

     FILE 'REGISTRY' ENTERED AT 15:51:09 ON 12 MAY 2009

     FILE 'USPATFULL' ENTERED AT 15:51:17 ON 12 MAY 2009
L8              TRA PLU=ON  L7 1- RN :     386 TERMS

     FILE 'REGISTRY' ENTERED AT 15:51:18 ON 12 MAY 2009
L9          386 SEA SPE=ON  ABB=ON  PLU=ON  L8

     FILE 'CAPLUS' ENTERED AT 15:51:37 ON 12 MAY 2009
L10           5 SEA SPE=ON  ABB=ON  PLU=ON  L9 AND CELLOBIOSYL
                D IBIB AB HITSTR 1-5
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                 ENTRY    SESSION
FULL ESTIMATED COST                              31.94     423.02

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)    SINCE FILE      TOTAL
                                                 ENTRY    SESSION
CA SUBSCRIBER PRICE                              -4.10      -4.10

 SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 15:53:11 ON 12 MAY 2009
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6.3° (c 0.526, CHCl3). I maltoside, fine needles, m. 288°, [α]D17 22.3° (c 0.735, CHCl3). In the same way, 500 mg. β'-(Δ5-3β-hydroxynorcholen-23-yl)-Δα',β'-butenolide (IV) and acetobromoglucose give 385 mg. IV tetraacetylglucoside, fine needles, m. 208-8.5°, in addition to 300 mg. recovered IV; IV glucoside, prepared by saponification with 0.1 N Ba(OMe)2 in MeOH at -10° for 2 days, crystals from EtOH, m. 270-5°. It gives a pos. L. test. Δ20,22-3β,21-Dihydroxycholenic acid lactone tetraacetylglucoside, crystal, from iso-AmOMe, m. 125-7°. These compds. have only a slight solubility in H2O. All m.ps. corrected and in evacuated tube.

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=> d his

     (FILE 'HOME' ENTERED AT 00:48:14 ON 13 MAY 2009)

     FILE 'REGISTRY' ENTERED AT 00:48:33 ON 13 MAY 2009
L1             STRUCTURE UPLOADED
L2           2 S L1 SAM
L3          65 S L1 SSS FULL

     FILE 'CAPLUS' ENTERED AT 00:50:47 ON 13 MAY 2009
L4           6 S L3
L5        3839 S STEROID AND (GLUCO OR GLYCO OR CELLOBIOSYL OR CELLBIOSIDE OR
L6        3722 S L5 AND PY<2002
L7         190 S STEROID AND (CELLBIOSYL OR CELLOBIOSIDE OR GLYCOSYL OR GLYCOS
L8           0 S L7 AND 3-O-CELLOBIOSYL
L9           0 S L8 AND 3-O-CELLBIOSIDE
               E CANCER+ALL/CT
L10          1 S L7 AND C16
L11         10 S STEROID AND (CELLBIOSYL OR CELLOBIOSIDE) AND PY<2002

=> logoff hold

     (FILE 'HOME' ENTERED AT 00:48:14 ON 13 MAY 2009)

     FILE 'REGISTRY' ENTERED AT 00:48:33 ON 13 MAY 2009
L1             STRUCTURE UPLOADED
               D L1
L2           2 SEA SSS SAM L1
L3          65 SEA SSS FUL L1

     FILE 'CAPLUS' ENTERED AT 00:50:47 ON 13 MAY 2009
L4           6 SEA SPE=ON  ABB=ON  PLU=ON  L3
               D IBIB AB HITSTR 1-6
L5        3839 SEA SPE=ON  ABB=ON  PLU=ON  STEROID AND (GLUCO OR GLYCO OR
               CELLOBIOSYL OR CELLBIOSIDE OR GLYCOSYL OR GLYCOSYLATED)
L6        3722 SEA SPE=ON  ABB=ON  PLU=ON  L5 AND PY<2002
L7         190 SEA SPE=ON  ABB=ON  PLU=ON  STEROID AND (CELLBIOSYL OR
               CELLOBIOSIDE OR GLYCOSYL OR GLYCOSYLATED) AND PY<2002
L8           0 SEA SPE=ON  ABB=ON  PLU=ON  L7 AND 3-O-CELLOBIOSYL
L9           0 SEA SPE=ON  ABB=ON  PLU=ON  L8 AND 3-O-CELLBIOSIDE
               SET LINE 250
               SET DETAIL OFF
               E CANCER+ALL/CT
               SET LINE LOGIN
               SET DETAIL LOGIN
L10          1 SEA SPE=ON  ABB=ON  PLU=ON  L7 AND C16
               D IBIB
L11         10 SEA SPE=ON  ABB=ON  PLU=ON  STEROID AND (CELLBIOSYL OR
               CELLOBIOSIDE) AND PY<2002
               D IBIB AB 1-10
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                   ENTRY     SESSION
FULL ESTIMATED COST                                131.09      318.63
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